

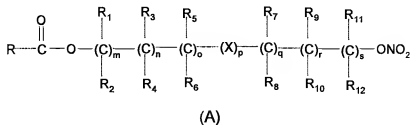
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# **I. AMENDMENTS TO THE CLAIMS:**

Claim 1. (Previously Presented) A process for preparing a compound of general formula (A)

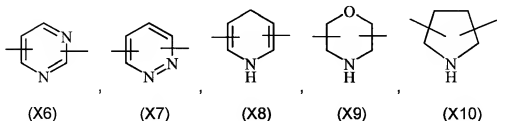
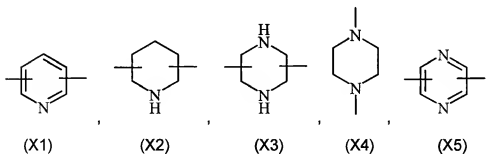


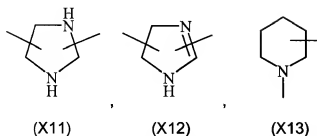
wherein R<sub>1</sub>-R<sub>12</sub> are the same or different and independently are hydrogen, straight or branched C<sub>1</sub>-C<sub>6</sub> alkyl, optionally substituted with aryl;

m, n, o, q, r and s are each independently an integer from 0 to 6, and p is 0 or 1, and

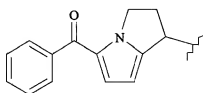
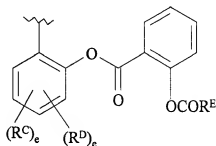
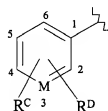
X is O, S, SO, SO<sub>2</sub>, NR<sub>13</sub> or PR<sub>13</sub>, in which R<sub>13</sub> is hydrogen, C<sub>1</sub>-C<sub>6</sub> alkyl, or X is selected from the group consisting of:

- saturated or unsaturated C<sub>5</sub>-C<sub>7</sub> cycloalkylene, optionally substituted with one or more straight or branched C<sub>1</sub>-C<sub>3</sub> alkyl groups;
- arylene, optionally substituted with one or more halogen atoms, straight or branched alkyl groups containing from 1 to 4 carbon atoms, or a straight or branched C<sub>1</sub>-C<sub>3</sub> perfluoroalkyl;
- a 5 or 6 member saturated, unsaturated, or aromatic heterocyclic ring selected from





and R is the radical of a pharmacologically active compound selected from the group consisting of:



wherein M is a carbon or nitrogen atom;

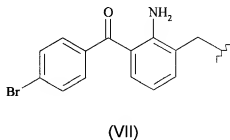
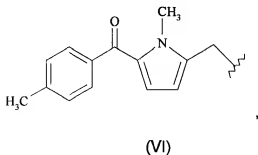
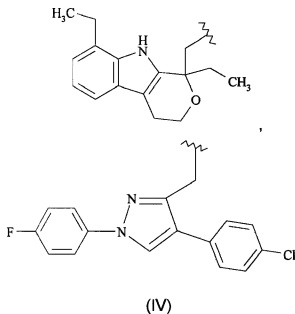
$R^C$  is selected from: H, OH,  $NH_2$ ,  $R^ECONH-$ ,  $R^ECOO-$ , an heterocyclic residue with 5 or 6 atoms that may be aromatic, saturated or unsaturated, containing one or more heteroatoms selected from oxygen, nitrogen or sulfur, and phenylamino ( $PhNH-$ ), in which the aromatic ring may be substituted with one or more substituents selected from the group consisting of halogen, straight or branched  $C_1$ - $C_4$ -alkyl and straight or if

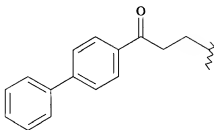
possible branched perfluoroalkyl;

e is 0 or 1;

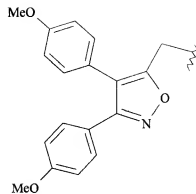
$R^E$  is selected from the group consisting of straight or branched  $C_1$ - $C_5$ -alkyl, phenyl substituted with  $OCOR^F$ , wherein  $R^F$  is selected from the group consisting of methyl, ethyl or straight or branched  $C_3$ - $C_6$ -alkyl or phenyl;

$R^D$  is selected from: H, OH, halogen,  $-NH_2$ , straight or branched  $C_1$ - $C_6$ -alkoxy, perfluoroalkyl having from 1 to 4 carbon atoms and mono or di- $(C_1$ - $C_6)$ alkylamino; with the proviso that  $R^C$  and  $R^D$  cannot both be H;

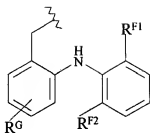




(VIII)

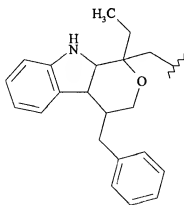


(IX)

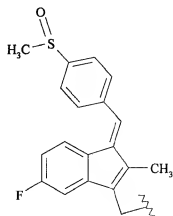


(X)

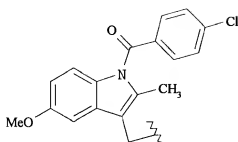
wherein  $R^{F1}$  and  $R^{F2}$  are halogens selected from chlorine, fluorine or bromine,  $R^G$  is hydrogen, straight or branched  $C_1$ - $C_6$ -alkyl;



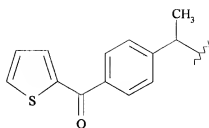
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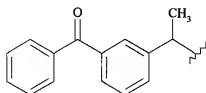
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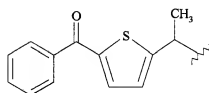
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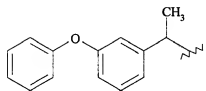
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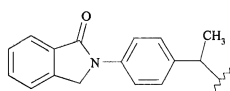
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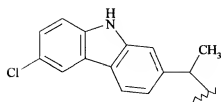
(XVI)



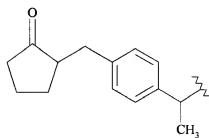
(XVII)



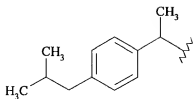
(XVIII)



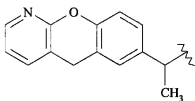
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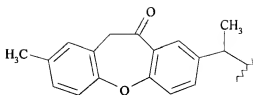
(XXI)



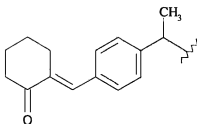
(XXII)



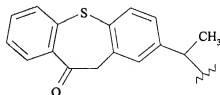
(XXIII)



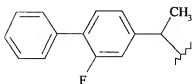
(XXIV)



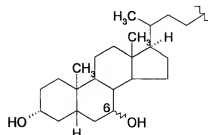
(XXV)



(XXVI)

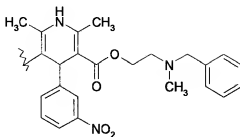


(XXVII)

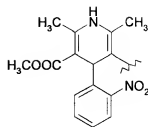


(XXVIII)

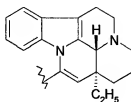
wherein the bond at 6 position in formula (XXVIII) may be  $\alpha$  or  $\beta$ ;



(XXIX)



(XXX)



(XXXI)

and wherein in all the formulae (I-XXXI) listed above, the wavy line represents the position wherein -COO- group is bound;

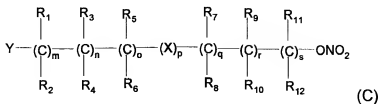
said process comprising reacting a compound of formula (B)



wherein R is as above defined and Z is hydrogen or a cation selected from

Li<sup>+</sup>, Na<sup>+</sup>, K<sup>+</sup>, Ca<sup>++</sup>, Mg<sup>++</sup>, tetralkylammonium, tetralkylphosphonium,

with a compound of formula (C)



wherein  $R_1$ - $R_{12}$  and  $m, n, o, p, q, r, s$  are as defined above and

Y is selected from

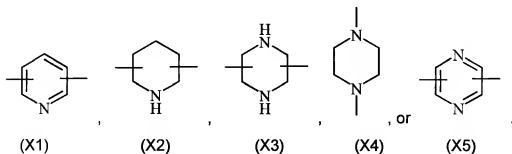
- $\text{BF}_4$ ,  $\text{-SbF}_6$ ,  $\text{FSO}_3^-$ ,  $\text{R}_A\text{SO}_3^-$ , in which  $\text{R}_A$  is a straight or branched  $\text{C}_1$ - $\text{C}_6$  alkyl, optionally substituted with one or more halogen atoms, or a  $\text{C}_1$ - $\text{C}_6$  alkylaryl;
- $\text{R}_B\text{COO}^-$ , wherein  $\text{R}_B$  is straight or branched  $\text{C}_1$ - $\text{C}_6$  alkyl, aryl, optionally substituted with one or more halogen atoms or  $\text{NO}_2$  groups,  $\text{C}_4$ - $\text{C}_{10}$  heteroaryl and containing one or more heteroatoms, which are the same or different, selected from nitrogen, oxygen, sulfur or phosphorus;
- aryloxy optionally substituted with one or more halogen atoms or  $\text{NO}_2$  groups, or heteroaryloxy.

Claim 2. (Previously Presented) A process for preparing a compound of formula (A) according to claim 1 wherein:

the substituents  $R_1$ - $R_{12}$  are the same or different and independently are hydrogen or straight or branched  $\text{C}_1$ - $\text{C}_3$  alkyl,

$m, n, o, p, q, r$  and  $s$  are as defined above,

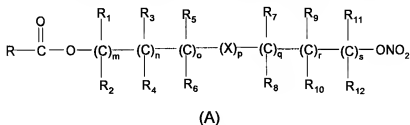
X is O, S or



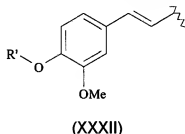


Claim 3. (Previously Presented) A process for preparing a compound of formula (A) according to claim 1 wherein R<sub>1</sub>-R<sub>4</sub> and R<sub>7</sub>-R<sub>10</sub> are hydrogens; m, n, q, and r are 1; o and s are 0; p is 0 or 1; and X is O or S.

Claim 4. (Previously Presented) A process for preparing a compound of formula (A)

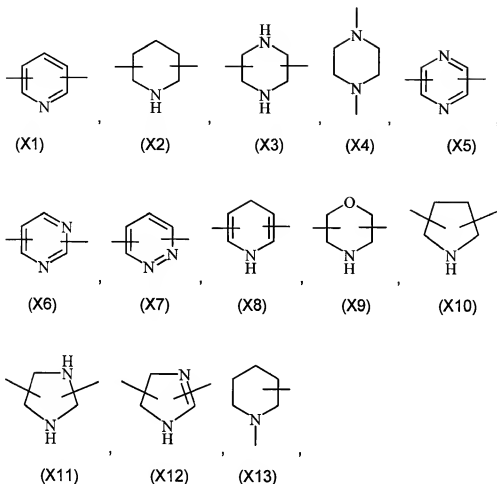


wherein R is the the ferulic acid radical of formula (XXXII):



wherein R' is H, or a group R(CO)-, in which R is as above identified;  
 and wherein the wavy line represents the position wherein a -COO group is bound;  
 R<sub>1</sub>-R<sub>12</sub> are the same or different and independently are hydrogen, straight or branched C<sub>1</sub>-C<sub>6</sub> alkyl, optionally substituted with aryl;  
 m, n, o, q, r and s are each independently an integer from 0 to 6, and p is 0 or 1, and  
 X is O, S, SO, SO<sub>2</sub>, NR<sub>13</sub> or PR<sub>13</sub>, in which R<sub>13</sub> is hydrogen, C<sub>1</sub>-C<sub>6</sub> alkyl, or X is selected from the group consisting of:

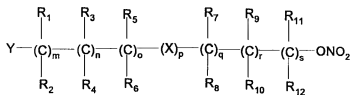
- saturated or unsaturated C<sub>5</sub>-C<sub>7</sub> cycloalkylene, optionally substituted with one or more straight or branched C<sub>1</sub>-C<sub>3</sub> alkyl groups;
- arylene, optionally substituted with one or more halogen atoms, straight or branched alkyl groups containing from 1 to 4 carbon atoms, or a straight or branched C<sub>1</sub>-C<sub>3</sub> perfluoroalkyl;
- a 5 or 6 member saturated, unsaturated, or aromatic heterocyclic ring selected from



said process comprising reacting a compound of formula (B):



wherein R is as above defined and Z is hydrogen or a cation selected from  $\text{Li}^+$ ,  $\text{Na}^+$ ,  $\text{K}^+$ ,  $\text{Ca}^{++}$ ,  $\text{Mg}^{++}$ , tetralkylammonium, tetralkylphosphonium, with a compound of formula (C):



(C)

wherein R<sub>1</sub>-R<sub>12</sub> and m,n,o,p,q,r,s are as defined above and

Y is selected from

- Br, Cl or I;

-BF<sub>4</sub><sup>-</sup>, -SbF<sub>6</sub><sup>-</sup>, FSO<sub>3</sub><sup>-</sup>, R<sub>A</sub>SO<sub>3</sub><sup>-</sup>, in which R<sub>A</sub> is a straight or branched C<sub>1</sub>-C<sub>6</sub> alkyl, optionally substituted with one or more halogen atoms, or a C<sub>1</sub>-C<sub>6</sub> alkylaryl;

R<sub>B</sub>COO<sup>-</sup>, wherein R<sub>B</sub> is straight or branched C<sub>1</sub>-C<sub>6</sub> alkyl, aryl, optionally substituted with one or more halogen atoms or NO<sub>2</sub> groups, C<sub>4</sub>-C<sub>10</sub> heteroaryl and containing one or more heteroatoms, which are the same or different, selected from nitrogen, oxygen sulfur and phosphorus;

aryloxy optionally substituted with one or more halogen atoms or NO<sub>2</sub> groups, or heteroaryloxy.

Claim 5. (Canceled)

Claim 6. (Currently Amended) A process for preparing a compound of formula (A) according to claim 1 or 4, wherein Y is selected from the group consisting of Br, Cl, I, -BF<sub>4</sub><sup>-</sup>, -SbF<sub>6</sub><sup>-</sup>, ClO<sub>4</sub><sup>-</sup>, FSO<sub>3</sub><sup>-</sup>, CF<sub>3</sub>SO<sub>3</sub><sup>-</sup>, C<sub>2</sub>F<sub>5</sub>SO<sub>3</sub><sup>-</sup>, C<sub>3</sub>F<sub>7</sub>SO<sub>3</sub><sup>-</sup>, C<sub>4</sub>F<sub>9</sub>SO<sub>3</sub><sup>-</sup>, p-CH<sub>3</sub>C<sub>6</sub>H<sub>4</sub>SO<sub>3</sub><sup>-</sup>.

Claim 7. (Previously Presented) A process for preparing a compound of formula (A) according to claim 1 or 4, wherein the reaction is performed in an organic solvent selected from acetone, tetrahydrofuran, dimethylformamide, N-methylpyrrolidone, sulfolane and acetonitrile.

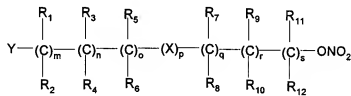
Claim 8. (Previously Presented) A process for preparing a compound of formula (A) according to claim 1 or 4, wherein the reaction is performed in a biphasic system comprising an aprotic dipolar solvent selected from toluene, chlorobenzene, nitrobenzene, tert-butyl-methylether and a water solution wherein the organic solution contains (C) and the water solution contain an alkaline metal salt of (B), in presence of a

phase transfer catalyst.

Claim 9. (Previously Presented) A process for preparing a compound of formula (A) according to claim 1 or 4, wherein the reaction is performed at a temperature ranging from 0°C to 100°C.

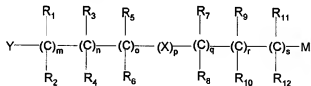
Claim 10. (Previously Presented) A process for preparing a compound of formula (A) according to claim 1 wherein the compounds of formula B and C are reacted at a (B)/(C) molar ratio of 2-0.5.

Claim 11. (Previously Presented) A process for preparing a compound of formula (C)



(C)

wherein R<sub>1</sub>, R<sub>12</sub>, m, n, o, p, q, r, s, X, Y are as defined in claim 1, comprising reacting a compound of the following formula (D)



(D)

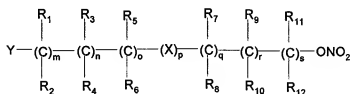
wherein M is OH and the other substituents and indices are as above defined, with a nitrating agent.

Claim 12. (Previously Presented) A process for preparing a compound of formula (C), according to claim 11 wherein the nitrating agent is sulfonitric mixture.

Claim 13. (Previously Presented) A process for preparing a compound of formula (C), according to claim 11 wherein the compound (D) and the nitrating agent are at molar ratio of 2-0.5.

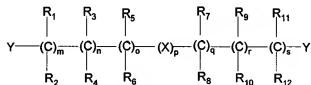
Claim 14. (Previously Presented) A process for preparing a compound of formula (C), according to claim 11 wherein the reaction is performed at a temperature ranging from 0°C to 100°C.

Claim 15. (Previously Presented) A process for preparing a compound of formula (C)



(C)

wherein  $R_1$ - $R_{12}$ , m, n, o, p, q, r, s, X, Y are as defined in claim 1, comprising reacting a compound of the following formula (E),



(E)

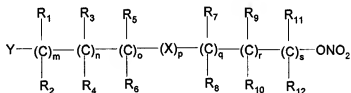
wherein  $R_1$ - $R_{12}$ , m, n, o, p, q, r, s, X, Y are as defined above with a nitrating agent.

Claim 16. (Previously Presented) A process for preparing a compound of formula (C), according to claim 15, wherein the nitrating agent is selected from alkaline metal nitrates, quaternary ammonium nitrates, quaternary phosphonium nitrates,  $AgNO_3$ ,  $Zn(NO_3)_2 \cdot 6H_2O$ .

Claim 17. (Previously Presented) A process for preparing a compound of formula (C), according to claim 15, wherein the compound of formula (E) and the nitrating agent are at molar ratio of 20:2.

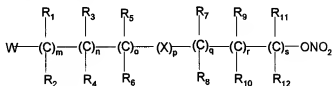
Claim 18. (Previously Presented) A process for preparing a compound of formula (C), according to claim 15, wherein the reaction is performed at a temperature ranging from 0°C to 100°C.

Claim 19. (Previously Presented) A process for preparing a compound of formula (C)



(C)

wherein  $R_1$ - $R_{12}$ , m, n, o, p, q, r, s, X, Y are as defined in claim 1, comprising reacting a compound of the following formula (F),



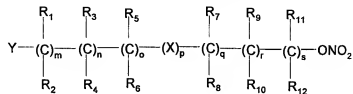
(F)

wherein  $R_1$ - $R_{12}$ , m, n, o, p, q, r, s, X, are as defined above, W is OH or halogen, with a compound selected from alkanoylsulfonylchloride and trifluoromethansulfonic anhydride when W is OH or with  $AgSbF_6$ ,  $AgBF_4$ ,  $AgClO_4$ ,  $CF_3SO_3Ag$ ,  $AgSO_3CH_3$ ,  $CH_3C_6H_4SO_3Ag$  when W is halogen.

Claim 20. (Original) A process for preparing a compound of formula (C) according to claim 19 wherein the compound (F) and the nitrating agent are at molar ratio of 2:0.5.

Claim 21. (Previously Presented) A process for preparing a compound of formula (C), according to claim 19, wherein the reaction is performed at a temperature ranging from 0°C to 100°C.

Claim 22. (Previously Presented) A compound of formula (C)

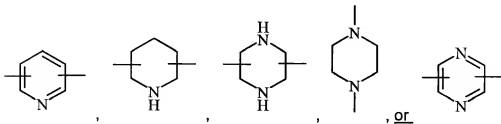


(C)

wherein R<sub>1</sub>-R<sub>12</sub>, m, n, o, p, q, r, s, X, Y are as defined in claim 1 with the proviso that Y is not halogen.

Claim 23. (Previously Presented) A process for preparing carboxylic acid nitrooxyalkyl derivatives of formula (A) of claim 19, comprising using nitrooxyalkyl derivatives of general formula (C).

Claim 24. (Previously Presented) A process for preparing a compound of formula (A) according to claim 4, wherein R<sub>1</sub>-R<sub>12</sub> are the same or different and independently are hydrogen or a straight or branched C<sub>1</sub>-C<sub>3</sub> alkyl,  
 m, n, o, p, q, r and s are as defined above,  
 X is O, S or



(X1)

(X2)

(X3)

(X4)

(X5)

Claim 25. (Previously Presented) A process for preparing a compound of formula (A) according to claim 4, wherein  $R_1$ - $R_4$  and  $R_7$ - $R_{10}$  are hydrogens; m, n, q and r are 1; o and s are 0; p is 0 or 1; and X is O or S.

Claim 26. (Previously Presented) A process for preparing a compound of formula (A) according to claim 4, wherein in the compound of formula (B), Y is Br.